of the lesion. In two other cases without physical signs in the lungs, proved by autopsy to be central pneumonia and bilateral gangrenous pneumonia respectively, a marked reaction occurred. In tuberculosis the results varied considerably. A positive reaction was met with in all cases, but the intensity of the reaction was not proportional to the clinical severity or extent of the pulmonary process. In general, however, the acute cases gave a stronger positive reaction than the chronic ones. From their experience with the test, Falk and Tedesco conclude that a repeatedly negative test is strong evidence that the disease process is limited to the bronchial mucosa. A very strong reaction (dark violet color, even after diluting five to ten times) indicates an extensive inflammatory (exudative) process in the lung itself, as in pneumonia. In doubtful cases in which the diagnosis lies between bronchitis and tuberculosis, a positive reaction favors the latter. Furthermore, cases of central pneumonia, unrecognizable by physical signs, should be strongly suspected with a marked positive reaction.

The Relationship of Anæmia Pseudoleukæmica Infantum to Rachitis.—Aschenheim and Benjamin (*Deut. Archiv f. klin. Med.*, 1909, xcvii, 529) have made a careful clinical and pathological study of 5 cases of so-called anæmia pseudoleukæmica infantum, and in addition have analyzed 70 recent cases in the literature. In all but 5 of these cases rickets existed definitely, and in 50 per cent. of them it was of severe grade. In the majority of cases in which autopsy has been performed, lymphoid "degeneration" and erythroblastosis of the bone marrow have been demonstrated. Similar alteration of the marrow is not uncommon in rickets. Aschenheim and Benjamin believe that anæmia pseudoleukæmica infantum results from the degenerative process of the bone marrow, which is one of the effects of rickets. The disease is, therefore, not a clinical entity, but rather a sequel of rachitis, comparable to tabes dorsalis after syphilis. As an expression of the lymphoid marrow, they find a marked reduction of the polymorphonuclear neutrophiles, and the numerous nucleated reds are due to red cell hyperplasia. The blood picture need not include a diminution in number of the erythrocytes or a leukocytosis, as their own cases and others in the literature show. The large mononuclears are usually increased. Myeloid metaplasia of the spleen is frequent, and even the liver may take part in the blood formation. The authors suggest that the condition be designated rachitic splenomegaly, and that the old names, anæmia splenica, anæmia pseudoleukæmica infantum, and anæmia pseudoperniciosa, be dropped.

A Peptid-splitting Ferment in Cancer of the Stomach.—Fischer has shown that digestion progresses further with proteins in carcinomatous stomach contents than in the normal stomach. Thus, the HCl deficit with normal chlorine content is explained. By the splitting of the proteins into polypeptids and eventually into mono-acids and diamono-acids, amino groups become free; these bind HCl, and, therefore, when present in sufficient quantity, may produce an HCl deficit, while the total acidity increases through the presence of the free carboxyl groups. This extended hydrolysis of proteins cannot be carried on by the pepsin-HCl of the gastric juice, but is done normally in the intestines by trypsin

The blood also contains ferments capable of similar work. In the absence of pancreatic juice and blood in the carcinomatous stomach contents, it would appear that another ferment must be present, which is capable of extended hydrolysis of proteins.

NEUBAUER and FISCHER (*Deut. Archiv f. klin. Med.*, 1909, xcvii, 499) have studied the gastric contents in health and disease, with a view of determining the presence of a specific ferment in carcinoma. They selected a polypeptid, glycyltryptophan, with which they test for the presence of a peptid-splitting ferment; if present, tryptophan is formed. This may be recognized by a reddish-violet coloration on the addition of bromine water. Numerous experiments have shown that there is present in malignant tumors, both sarcomas and carcinomas, a ferment capable of splitting glycyltryptophan very much more rapidly than that found in normal tissues and benign tumors. No cleavage whatever is produced by the pepsin-HCl from human and canine stomachs. Experiments have also shown that possible peptid-splitting ferments in yeasts, moulds, and bacteria are eliminated, with the technique adopted, by filtration of the gastric contents or, more simply, by the addition of toluol. Gastric contents which contain pancreatic juice or blood are obviously unsuited for examination. The absence of the former may be determined by testing for bile with dilute tincture of iodine, while the latter is tested for by the acetic acid-ether and guaiac tincture test of Weber.

Technique.—The test breakfast is removed after one-half to three-quarters of an hour. It is tested for bile (and consequently pancreatic juice) and for blood; if either are present, the specimen must be discarded and another obtained. The gastric contents are then tested with bromine water to exclude the presence of tryptophan; if this test is positive, it also necessitates obtaining a fresh specimen. All of the three tests being negative, about 10 c.c. of filtered gastric contents is placed in a test-tube with a little glycyltryptophan, covered with toluol to prevent bacterial growth, and put in the incubator for four hours. With a pipette 2 to 3 c.c. is withdrawn and acidified with a few drops of 3 per cent. acetic acid. Bromine vapor is allowed to settle in the test-tube until a light brownish color is seen in the upper part of the tube; the contents are shaken, and if a rose color develops, free tryptophan is present, and the test is positive. An excess of bromine must be avoided, as it causes a disappearance of the rose color. If no rose color is seen, one adds bromine fumes carefully as before, shakes, and observes. One continues in this way till the fluid in the test-tube shows a light yellow color, which indicates an excess of bromine and a negative result. Calcium chlorate, $\frac{1}{10}$ saturated aqueous solution, may be substituted for the bromine; the same color and similar difficulties are met with.

Applying their method to clinical work, Neubauer and Fischer obtained negative results in 4 normal stomachs, 10 ulcers of the stomach, 12 gastric diseases other than carcinoma, 4 cases of suspected carcinoma, and in the vomitus of 2 cancer cases. A positive result was obtained in 17 cases of cancer of the stomach and in 6 suspected cases. The results demonstrate the presence of a ferment (which is inactivated by 0.36 per cent. HCl) in carcinoma of the stomach, which hydrolyzes polypeptids, and indicate its usefulness as a diagnostic procedure.